

## ACTIVITY 9

## MUFFY'S NECKLACE

Muffy saw an absolutely gorgeous necklace on sale after Christmas that she felt that she must have. She had just received a new credit card that had an Annual Percentage Yield (APY) of 14.4% (monthly interest of 1.2%) and required a minimum payment of only \$40 a month. Muffy decided to spend the \$3000 for the necklace as she felt that she could easily make the minimum payments. For the first six months she made every payment on time. In July, Muffy became sick and could not make the payments. The credit card company was magnanimous and said that she could wait 6 months before resuming her monthly payments although the interest would continue. Fill out the table below to see how much Muffy still owed in July and how much she will owe at the end of the year.

|     | Amount owed at beginning month | Interest     | Owed + Interest | Payment   | Owed at end of month |
|-----|--------------------------------|--------------|-----------------|-----------|----------------------|
| Jan | 3000                           | 36.00        | 3036            | 40        | 2996                 |
| Feb | 2996                           | <b>35.95</b> | <b>3031.95</b>  | <b>40</b> | <b>2991.95</b>       |
| Mar | <b>2991.95</b>                 | <b>35.90</b> | <b>3027.85</b>  | <b>40</b> | <b>2987.85</b>       |
| Apr | <b>2987.85</b>                 | <b>35.85</b> | <b>3023.70</b>  | <b>40</b> | <b>2983.70</b>       |
| May | <b>2983.70</b>                 | <b>35.80</b> | <b>3019.50</b>  | <b>40</b> | <b>2979.50</b>       |
| Jun | <b>2979.50</b>                 | <b>35.75</b> | <b>3015.25</b>  | <b>40</b> | <b>2975.25</b>       |
| Jul | <b>2975.25</b>                 | <b>35.70</b> | <b>3010.95</b>  | -         | <b>3010.95</b>       |
| Aug | <b>3010.95</b>                 | <b>36.13</b> | <b>3047.08</b>  | -         | <b>3047.08</b>       |
| Sep | <b>3047.08</b>                 | <b>36.56</b> | <b>3083.64</b>  | -         | <b>3083.64</b>       |
| Oct | <b>3083.64</b>                 | <b>37.00</b> | <b>3120.64</b>  | -         | <b>3120.64</b>       |
| Nov | <b>3120.64</b>                 | <b>37.45</b> | <b>3158.09</b>  | -         | <b>3158.09</b>       |
| Dec | <b>3158.09</b>                 | <b>37.90</b> | <b>3195.99</b>  | -         | <b>3195.99</b>       |